DOCUMENT RESUME

ED 225 666 PS 013 317

AUTHOR Landerholm, Elizabeth J.
TITLE Comparison of Mothers' and Fathers' Play with Their Male and Female Infants.
PUB DATE Nov 81
NOTE 27p.; Paper presented at the Annual Meeting of the National Association for the Education of Young Children (Detroit, MI, November 5-8, 1981).
PUB TYPE Reports - Research/Technical (143) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Behavior Patterns; Comparative Analysis; *Fathers; *Infants; *Mothers; *Parent Child Relationship; Play; *Sex Differences; Verbal Stimuli
IDENTIFIERS *Physical Contact

ABSTRACT

The ways in which fathers and mothers communicate with and teach their 6-month-old first-born infants were compared. Twenty-two white, middle class mothers and fathers were videotaped interacting with their infants (11 male, 11 female) on 10 tasks. Trained observers coded the parents' interaction with their infants on the following variables: physical contact, social/verbal stimulation, object/material play, effectiveness, responsiveness, and teaching behavior. Results indicated that both mothers and fathers used more physical contact with their male infants and more object/material play with their female infants. While mothers exhibited more social/verbal behaviors with their infants than fathers did, fathers had more effect on female infants than on male infants. Finally, mothers were found to be more likely than fathers to use social/verbal attention-getting behaviors when teaching their infants. (MP)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

ED225666

COMPARISON OF MOTHERS' AND FATHERS' PLAY WITH THEIR MALE AND FEMALE INFANTS

Elizabeth J. Landerholm

Roosevelt University

Paper presented at the
National Association for the Education
of Young Children Conference
Detroit, 1981

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Elizabeth J. Landerholm

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

PS013317

ABSTRACT

The purpose of the study was to investigate the relationship between the sex of the parent and his/her interaction with his/her six month old first-born infants. Twenty-two white, middle class mothers and fathers were videotaped interacting with their infants (eleven male, eleven female) on ten tasks. Trained observers coded the parents' interaction with their infants on the following variables: physical contact, social/verbal stimulation, object/material play, effectiveness, responsiveness, and teaching behavior. The data were analyzed by conducting a 2 x 2 analysis of variance (sex of the parent and sex of the child). The significant findings were: Both mothers and fathers used more physical contact (.02 level) with their male infants and more object/material play (.06 level) with their female infants; mothers exhibited more social/verbal behaviors (.04 level) with their infants than fathers did; fathers had more effect with female infants than with male infants (.03 level); and mothers were more likely than fathers to use social/verbal attention getting behaviors when teaching their infants (.05 level.)

COMPARISON OF MOTHERS' AND FATHERS' PLAY

WITH THEIR MALE AND FEMALE INFANTS

Currently, there is a great deal of interest in research with parents and infants. Until the seventies, the research on infants had been limited to research on mothers and infants. As fathers have begun to assume more active roles in the caretaking of their infants, researchers began to ask questions regarding the father's role and effect on the infant's development.

The researcher in this study compared the interaction of fathers and mothers with their infants, specifically the ways in which fathers and mothers communicate with and teach their infants, in terms of touching, talking, and using toys with them. Fathers and mothers were observed as they encouraged the child to do specific tasks and as they responded to the child's signals.

Mother/Infant Interaction Studies

The intervention studies of Weikart and Lambie,[1] Gordon,[2] and Heber,[3] planned to teach mothers effective mothering skills,

---

[1]David P. Weikart and Delores Lambie, "Early Enrichment in Infants," in Education of the Infant and Young Child, ed. Victor Denenberg (New York: Academic Press, 1970).

[2]Ira J. Gordon, The Florida Parent Education Early Intervention Projects: A Longitudinal Look (IREC Publication Office, January 1975).

[3]Arthur Whimbey and Linda Shaw Whimbey, Intelligence Can Be Taught (New York: E.P. Dutton & Co., 1975).

showed that mother/child interaction can have an effect on the cognitive development of the child. Researchers now are studying the effect of the sex of the child on the mother's interaction. As yet there is a great deal of controversy and confusion concerning the effect of the child's sex on mother/infant interaction. Are the differences that we find between males and females as adults inherited or are they influenced by early socialization? Some researchers argue that sex differences found in newborns are due to inherited differences, while sex differences found in older infants are more likely to be due to socialization. Even with neonates, however, methodological difficulties and small sample sizes of different researchers may cause conflicting results. For example, Freedman[1] found that at ten weeks girls learn better with auditory and verbal reinforcement, while boys learn bettern with visual reinforcement. On the other hand, Osofsky and Danzger in Sherrod[2] found that male neonates were more receptive to auditory stimulation.

Other studies of mothers and infants have found differences in mother's behavior toward male and female infants. Moss[3] found that mothers held boys more at age three weeks and at three months. They also aroused the boys more and imitated the vocalizations of the

---

[1]Daniel Freedman, Human Infancy, An Evolutionary Perspective (New York: Halsted Press, 1974).

[2]Kathryn Sherrod, Peter Vietze, and Steven Friedman, Infancy (Monterey CA: Brooks and Cole Publishing Co., 1978).

[3]Howard A. Moss, "Sex, Age and State as Determinants of Mother-Infant Interaction," Merrill Palmer Quarterly 13 (1967): 19-35.

girls. Goldberg and Lewis[1] found that at six months of age mothers of girls touched girls more and vocalized to them more than boys. Lewis[2] found that mothers of three-month-old girls vocalized to and looked at them more, while mothers of boys showed more holding and touching behaviors.

Clarke-Stewart,[3] in her longitudinal study of black and white lower-class mothers and their infants from age nine months through eighteen months, found that white mothers of girls more often interacted with their infants in a verbal mode while white mothers of boys more often interacted with their infants with materials and objects. Black mothers more often interacted with their infants in a physical mode.

Most of the mother/infant interaction studies did not focus on teaching behavior, but focused on other specific behaviors in the interaction process. Typical material behaviors looked at by Lewis and Goldberg, Moss, Clarke-Stewart,[4] and Lewis were smiling, touching, looking, talking, imitating, and caretaking behaviors.

---

[1]Susan Goldberg and Michael Lewis, "Play Behavior in the Year-Old Infant: Early Sex Differences," Child Development 40 (1969): 21-31.

[2]Michael Lewis, "State as an Infant-Environment Interaction: An Analysis of Mother-Infant Interaction as a Function of Sex," Merrill-Palmer Quarterly 18, no. 2 (1972): 95-122.

[3]K. Allison Clarke-Stewart, "Interactions Between Mothers and Their Young Children: Characteristics and Consequences," Monographs of the Society for Research in Child Development 38 (December 1973): 1-109.

[4]Ibid.

Hess,[1] Slaughter,[2] and Steward and Steward,[3] however, studied how mothers teach their children. Hess found that the mothers' language use affected children's problem solving ability. Slaughter found that the parents' skills as socialization agents, regardless of the language used at home, influenced achievement. Steward and Steward found that mothers in some cultures (Anglo and Chinese) saw themselves as both teachers and mothers, while in other cultures (Mexican) they did not see themselves as teachers.

All four of the investigators cited here studied the teaching behavior of mothers of preschool children. These studies demonstrated that mothers have an effect on the cognitive development of their children. Jean Carew,[4] in studying Anglo children as young as one to three years old, found that mothers affected the child's intellectual development. She found, like the researchers with older children, that mothers of well developing children tended to function as teachers as

---

[1]R. D. Hess and V. C. Shipman, "Early Experiences in the Socialization of Cognitive Modes in Children," Child Development 34 (1965): 869-86.

[2]Helen Slaughter, "Effect of Parent Involvement in an Early Intervention Program upon Environmental Process Variables Related to Achievement," Paper presented at the annual meeting of the American Educational Research Association, Washington DC, March 20-April 13, 1975. (ERIC Document Reproduction Service No. ED 107 373)

[3]Margaret Steward and David Steward, "The Observation of Anglo, Mexican and Chinese-American Mothers Teaching their Youngsters," Child Development 44 (1973): 329-37.

[4]Jean Carew et al., Observing Intelligence in Young Children (Englewood Cliffs NJ: Prentice-Hall, 1976).

well as in many other capacities (a model, facilitator, a restrictor, a participator, an entertainer, a playmate, and a converser).

Father/Infant Interaction Studies

Compared to the mother/infant studies, very little has been done in the area of father/infant interaction. In particular, there has not been a focus on the father's teaching behavior. What work has been done, focused, rather, on such questions as whether the infant was as attached to the father as the mother, or whether there was a difference between mothers' and fathers' interaction with their infants. Clarke-Stewart,[1] Lamb,[2] and Yogman[3] all found that mothers talked more than fathers with their infants, while fathers had more physical interaction with their infants than mothers did.

Another area of current research interest is the effect of the child's sex on the parent's interaction. Fathers seem to prefer boys, especially first-born boys.[4] They seem to be effective in enhancing

---

[1]K. Alison Clarke-Stewart, "The Father's Impact on Mother and Child," Paper presented at Society for Research in Child Development meeting, March 1977.

[2]Michael E. Lamb, "The Father's Role in the Infant's Social World," in Mother/Child Father/Child Relationships, ed. Joseph H. Stevens and Marilyn Mathews (Washington DC: National Association for the Education of Young Children, 1978).

[3]Michael W. Yogman, "The Goals and Structures of Face-to-Face Interaction between Infants and Fathers," Paper presented at the biennial meeting of the Society for Research in Child Development, New Orleans, March 1972.

[4]Irma Rendina and Jean D. Dickerscheid, "Father Involvement with First-Born Infants," Family Coordinator (October 1976),

sex role characteristics in girls[1] and they seem more concerned than mothers that their boys not be classed as sissies.[2]

The preference studies, sex role identity, and the comparison of mother/infant and father/infant interaction studies have been confusing and contradictory. Few studies included mothers and fathers and male and female infants and those which did include mothers, fathers, and male and female infants did not always include as complete an array of variables as did the mother/infant studies. This study was planned to study mother and father interaction with male and female infants with respect to six variables: physical play, social-verbal behavior, object (toy) play, effectiveness of teaching behavior, responsiveness, and teaching style (see Table 1)

Method

Sample. Twenty-two middle class couples and their first-born six-month-old infants (eleven male, eleven female) participated in the study. All subjects were volunteers.

---

pp. 373-78; Lamb; R. D. Parke and D. W. Sawin, "The Father's Role in Infancy: A Re-Evaluation," Family Coordinator 25 (1976): 365-77.

[1]D. B. Lynn, The Father: His Role in Child Development (Monterey CA: Brooks Cole, 1974).

[2]L. M. Lansky, "The Family Structure also Affects the Model: Sex-Role Attitudes in Parents of Preschool children," Merrill-Palmer Quarterly 13 (1967): 139-50.

TABLE 1

OBSERVABLE VARIABLES CHART

1. Physical Contact

   a) touches
   b) holds
   c) affectionate--tactile
   d) lifts
   e) holds baby up
   f) adjusts baby's position
   g) physical play
   h) body gestures

2. Social/Verbal Stimulation

   a) looks at baby (face)
   b) looks at baby (body)
   c) calls baby
   d) calls baby's name
   e) referential speech
   f) directive speech
   g) social speech
   h) smiles at baby
   i) smiles

3. Object/Material Play

   a) mother points to object
   b) shows object to baby
   c) moves object to attract baby
   d) gives object to baby
   e) takes object from baby
   f) distracts baby with object
   g) object play
   h) demonstrates

4. Effectiveness

   a) baby accepts parent's physical or social contact
   b) baby is soothed
   c) baby attended parent
   d) baby obeyed parent's directions

5. Responsiveness

   a) R (physical)
   b) R (social)
   c) R (object/materials)
   d) holds/soothes
   e) talks/soothes
   f) attends needs
   g) feeds
   h) rocks
   i) imitates

6. Teaching Behavior

   a) gets attention
      1) physical contact (see #1)
      2) social/verbal stimulation (see #2)
      3) object/material play (see #3)
   b) instruction
      1) physical
      2) verbal
      3) object
   c) child response
      1) accept
      2) ignore
      3) reject
   d) feedback
      1) positive
         a. smile
         b. verbal praise
         c. physical
      2) negative
         a. frown
         b. verbal
         c. physical
      3) try new technique

Procedure. All subjects were videotaped in their own home by an investigator. Two visits were made to each home: one was to videotape the mother and infant, and the other was to videotape the father and infant. The order of videotaping was randomly assigned. Each father and mother was videotaped with the infant doing the following ten tasks:

	Tasks	Time Allotment (Seconds)
1.	Get baby's attention (any way).	60
2.	Play with baby (way he likes at home).	120
3.	Show baby object (choose one--doll, stuffed animal, fire truck) and get baby's attention.	120
4.	Get baby to reach, take rattle and shake it.	120
5.	Show baby how to pull a pull-toy.	120
6.	Parent choose objects you think child will like.	120
7.	Put baby on mat to play with objects while parent fills out questionnaire.	
8.	Show the baby how to put objects away in the bag.	120
9.	Get baby excited.	120
10.	Calm baby.	60
		16 minutes

The tasks were chosen to compare mothers and fathers on both open ended tasks (such as play with baby) and specific teaching tasks

such as show the baby how to shake a rattle, pull a pull toy and put away objects in a bag. The parent's effectiveness with his/her infant was evaluated on all ten tasks in terms of whether the infant accepted the parent's contact, attended, obeyed directions, completed the task, and was soothed. The parent's teaching behavior was evaluated on three teaching tasks: Get the baby to reach, take rattle and shake it; Show the baby how to pull a pull-toy; Show the baby how to put the objects away in the bag.

Selection of Instruments

Researchers in previous parent/infant studies[1] investigated the following behaviors on the part of parents: looking at the baby, smiling, touching, holding, talking, imitating, and other caretaking behaviors. Koller's adaptation of Clarke-Stewart's checklist included the most complete array of observable variables of any investigators' checklists found in the literature. With this instrument, this researcher was able to compare mothers' and fathers' interactions with their infants in terms of physical contact, social-verbal stimulation, and object/material play.

However, as this checklist did not focus on teaching behavior, the investigator developed the Teaching Behavior Code sheet using the Steward and Steward concept of a teaching loop and reclassifying

---

[1]Moss; Goldberg and Lewis; Clarke-Stewart, "Interactions"; Terrence J. Koller, "The Relationship of Infant Temperament to Father-Infant and Mother-Infant Interaction" (Ph.D. pilot study, Illinois Institute of Technology, 1979); Lewis.

Clarke-Stewart's and Koller's behavioral observation units under the loop. Steward and Steward held that teaching occurs in a four-part loop: (a) parent got child's attention, (b) parent gave child instruction, (c) child responded, and (d) parent gave child feedback.

Clarke-Stewart's and Koller's behavioral observation units were used to record the parent's behavior under parts (a) and (b), attention and instruction. For example, if the parent touched the child, called the baby's name, and looked at the baby, checks were placed in those three boxes under attention. If the parent then called the baby's name, showed the object, and demonstrated the tasks, checks were placed under instruction. Then a check was coded under accept, ignore, or reject, depending on the baby's response to the task. Finally, the parent's feedback to the child was coded positive (smile, verbal praise, or physical praise) or negative (frown, verbal no, or physical no). The Teaching Behavior Code sheet was used only for tasks 4, 5, and 8, which were classified as teaching tasks.

In addition, the investigator adapted the Effect Coding sheet from Clarke-Stewart[1] to code the variable effect. The effect variable consisted of the following behavioral observation units: child accepts parent's physical or social contact, child is soothed by parent, child attended parent, child obeyed parent's directions and completed task. Effect was coded by trained observers at the end of each of the ten tasks.

---

[1]Clarke-Stewart, "Interactions."

Interaction Coding. Each parent and his/her infant was videotaped for sixteen minutes while performing ten tasks. Later, trained observers watched the videotapes and coded, at ten second intervals, the parent's interaction with his/her infant on two coding sheets adapted from Koller and Clarke-Stewart.[1] In addition, the observers coded the teaching behavior of the parents of the Teaching Behavior code sheet adapted from Koller, Clarke-Stewart, and Steward and Steward. The three trained coders achieved an average inter-coder reliability rate of .93.

Data Analysis. The data was analyzed by conducting an analysis of variance of the sex of the parent, the sex of the child and the interaction between the sex of the parent and the sex of the child. Table 2 contains the means and standard deviations for five variables: physical contact, social/verbal stimulation, object/material play, effectiveness, responsiveness.

The sixth variable, teaching behavior, was also analyzed by conducting an analysis of variance of the sex of the parent, the sex of the child and the interaction between the sex of the parent and the sex of the child. Table 3 contains the means and standard deviations for the variable teaching behavior.

The abbreviation sexpar is used for sex of parent and sexch for sex of the child.

The summary of the findings for all six variables is found in Table 4.

---

[1] Ibid.

TABLE 2

VARIABLES 1-5

Group			Physical Contact		Social/Verbal		Object/Material		Effect		Response	
Sexpar	Sexch	N	MN	SD	MN	SD	MN	SD	MN	SD	MN	SD
Male		22	89.27	31.46	189.32	27.80	63.22	19.44	17.59	3.13	36.91	16.38
Female		22	83.55	19.06	205.64	24.30	60.50	24.40	18.55	2.24	40.55	17.64
	Male	22	95.41	26.14	203.95	23.01	53.05	16.31	17.36	3.11	41.90	15.98
	Female	22	77.41	22.74	191.00	29.75	70.68	23.29	18.77	2.14	35.55	17.60
Male	Male	11	97.73	31.63	195.55	21.42	50.55	12.44	16.0	3.63	43.27	12.22
Male	Female	11	78.82	28.93	183.09	32.84	75.91	16.89	19.18	1.33	30.55	18.03
Female	Male	11	91.09	19.83	212.36	22.30	55.55	20.08	18.73	1.74	40.55	19.57
Female	Female	11	76.00	15.63	198.90	25.35	65.45	28.17	18.36	2.73	40.55	16.44

TABLE 3.

DESCRIPTIVE DATA FOR VARIABLE 6 ANALYZED BY SEX OF PARENT AND CHILD

Group			Teaching Behavior: Attention						Teaching Behavior: Instruction						Teaching Behavior: Response						Teaching Behavior: Feedback			
			Physical		Soc/Verb		Obj/Mat		Physical		Soc/Verb		Obj/Mat		Accept		Neutral		Reject		Positive		Negative	
Sex par	Sex Ch	N	MN	SD	MN	SD	MN	SD	MN	SD	MN	SD	MN	SD	MN	SD	MN	SD	MN	SD	MN	SD	MN	SD
M		22	1.80	1.70	6.59	1.79	4.90	1.50	5.82	3.84	19.64	3.47	15.45	5.20	4.45	1.71	3.82	1.87	0.68	0.95	5.90	2.89	1 18	1.65
F		22	1.54	1.76	7.64	1.68	5.36	2.12	4.45	3.13	20.18	3.69	16.91	5.16	4.50	2.18	3.86	2.38	0.54	0.56	6.14	4.56	1.18	1.79
	M	22	1.77	1.60	6.77	1.44	5.55	1.92	5.30	4.04	20.00	3.88	16.36	4.58	4.40	1.89	3.86	1.89	0.68	1.04	6.14	3.44	1.04	1.86
	F	22	1.63	1.40	7.45	2.06	4.73	1.70	4.78	2.97	19.81	3.28	16.00	6.71	4.55	2.06	3.82	2.36	0.55	0.74	5.90	4.16	1.31	1.55
M	M	11	2.09	1.81	6.45	1.21	5.45	1.62	6.64	4.61	19.64	3.01	15.64	4.74	4.18	1.94	4.00	1.98	0.81	1.08	6.09	3.29	1.18	2.18
M	F	11	1.64	1.63	6.73	2.28	4.36	1.21	5.00	2.86	19.64	4.03	15.27	5.87	4.73	1.62	3.63	1.91	0.55	1.82	5.73	2.65	1.18	0.98
F	M	11	16.00	1.45	7.09	1.64	5.64	2.25	4.36	3.20	20.36	4.72	17.09	4.53	4.64	1.91	3.73	1.95	0.55	1.04	6.18	3.79	0.90	1.57
F	F	11	18.00	1.64	8.18	1.60	5.09	2.07	4.55	3.21	20.00	2.49	16.73	7.68	4.36	2.50	4.00	1.83	0.55	0.69	6.09	5.44	1.45	2.07

TABLE 4

SUMMARY OF ANALYSIS OF VARIANCE DATA
FOR VARIABLES 1 TO 6

	Physical Contact	Social/ Verbal	Object/ Material	Effect	Response	Teaching Behavior
Sexpar	NS	Sig. $p < .04$	NS	NS	NS	*
Sexch	Sig. $p < .02$	NS	Sig. $p < .006$	NS	NS	NS
Sexpar x Sexch	NS	NS	NS	Sig. $p < .03$	NS	NS

*Teaching Behavior was significant only on the subvariable attention--social/verbal. Mothers used more social/verbal attention than fathers did ($p < .05$).

Physical Contact. Both fathers and mothers exhibited significantly ($p < .01$) more physical contact with boys than they did with girls.

Social/Verbal Stimulation. Mothers showed significantly ($p < .04$) more social/verbal stimulation with both their male and female infants than did the fathers.

Object/Material Play. Both fathers and mothers used significantly ($p < .006$) more object/material play with girls than with boys.

Effectiveness. There was no difference in the fathers' and mothers' ability to get their children to perform tasks. However, fathers were significantly ($p < .025$) more likely to succeed in teaching their female infants to do a task than they were their male infants.

Responsiveness. There was no difference between fathers' and mothers' responses to male and female infants' needs.

Teaching Behavior. There were no significant differences between mothers' and fathers' teaching behavior with their infants in instruction, response, or feedback.

There was a significant difference in getting the child's attention. Mothers were significantly ($p < .02$) more likely than fathers to use social verbal behaviors to get the child's attention. A summary of the findings for variables 1-6 is found in Table 4.

Discussion

The results obtained on the variable Physical Contact, indicated that there was no significant difference between the quantity of physical contact behaviors that mothers exhibited with their infants as compared to the amount of physical contact behaviors that fathers exhibited with their infants. Yogman, Clarke-Stewart,[1] and Lamb all found differences between mothers and fathers in physical contact behaviors. However, the investigator noticed that quite a few of the mothers in this study took their infants to the gym and swim classes at the YMCA to exercise. They repeated some of these exercises with their infants on the videotapes. This may account for the fact that there was no significant difference between physical contact behaviors for mothers and fathers. However, there was a significant difference in physical contact behaviors depending on the sex of the child. Both mothers and fathers exhibited significantly more physical contact behaviors toward their male infants than they did toward their female infants. Lewis, in a study of mothers and infants, reported that mothers of boys exhibited more touching and holding behaviors while mothers of girls exhibited more vocal and looking behaviors. Yogman, Clarke-Stewart, and Lamb did not report any differences based on the sex of the child. The difference found in this study may be due to the influence of the stereotype that boys are more active and more sturdy

---

[1]Clarke-Stewart, "The Father's Impact."

than girls. It may also be that boys respond more readily to vigorous play.

The results obtained for the variable Social/Verbal Stimulation indicated that mothers exhibited significantly more social/verbal behaviors than fathers did. This corroborates the findings of Clarke-Stewart, Lamb, and Yogman.

The results obtained for the variable Object/Material Play indicated that there was no significant difference in object/material play behaviors based on the sex of the parent or the interaction between the sex of the parent and the sex of the child. There was a significant difference based on the sex of the child. Both mothers and fathers exhibited more object/material play with female infants than with male infants. This finding is opposite the findings of Clarke-Stewart[1] who found that white mothers of boys used more object/play while white mothers of girls used more social/verbal stimulation. Clarke-Stewart investigated naturally occurring behavior of the mother and her infant in the home, while in the present study the investigator gave parents specific open-ended tasks to perform with their infants. In the open-ended tasks, parents tended not just to talk to the baby, but rather to talk and use physical play or to talk and use object and materials. Parents tended to talk and use toys with girls and talk and use physical play with boys.

The results obtained for the variable Effectiveness indicated that there was no significant difference in effectiveness behaviors

---

[1]Clarke-Stewart, "Interactions."

based on the sex of the parent or the sex of the child, but that there was a significant difference in effectiveness behaviors in terms of the interaction of the sex of the parent and the sex of the child. Fathers had more effect with their female infants than male infants. In general the fathers seemed to vary more than the mothers in their skill in understanding the non-verbal signals of the infant. Some fathers were very skilled; some were quite unskilled. Mothers did not seem to show as much variability perhaps due to social conditioning, perhaps due to practice. The female infants seemed to perform better than the male infants even with fewer clues from the father. They seemed to be able to do the tasks in spite of what the father did. This may be related to female infants' earlier cognitive development[1] or it may be that female infants are more sensitive to social/verbal signals.[2]

There was no significant difference between the sex of the parent or the sex of the child or the interaction on the variable responsiveness.

On the variable Teaching Behavior the only significant difference based on the sex of the parent was social/verbal attention. Mothers were significantly more likely to seek the child's attention by social/verbal behaviors than were fathers. This corroborates the findings of Clarke-Stewart,[3] Lamb, and Yogman. It also corroborates the folklore that females talk more than males.

---

[1]Ibid.

[2]Freedman, Human Infancy.

[3]Clarke-Stewart, "The Father's Impact.

All other aspects of the teaching behavior were not significant. It seemed to the investigator, however, in watching the tapes, that there was a greater variability among parents in teaching style rather than as fathers and mothers as a group. This variability in terms of teaching skills showed up especially on Task 8 (Show the baby how to put objects away in the bag). On this task, parents reacted in one of four general patterns:

1. "You've got to be kidding." They did not believe that the infant could put the toys in the bag. So they generally put the toys away themselves or just kept asking for the toy and did not change their strategy.

2. The second most commonly used method was to show the child a toy, let him look at it and play with it awhile, then give him another toy and take away the first. This method did not accomplish the task of getting the child to put away the toys, but was a good teaching strategy for naming objects and exposing the child to exploring new objects.

3. The third method was to put the bag close to the baby, demonstrate how to put the toy in and then give the child a toy. This often worked as the child would drop a toy in by chance. The parent would then give the baby positive feedback and after several such occurrences the baby would get the idea that that was what he was supposed to do, and drop in a toy.

4. The final method was rarely used, but interesting. In this method, the parent held the baby upside down, let him grab and pick up a toy, then moved him over like a crane to drop the toy in the bag.

This was an interesting game to the baby and he usually got the idea and dropped in some of the toys.

Concluding Statement

Father-infant interaction is just now being explored. It seems obvious that both parents have an effect on their infant's growth and development, yet little research has been done to determine what effect fathers do have on their infants nor to determine the effect of the sex of the child on this interaction process. In addition, there is little data on the father's teaching behavior with his infant.

The experiment demonstrated that there are significant differences in how mothers and fathers relate to their infants as young as six months old and that the sex of the infant also has a significant effect on this interaction.

REFERENCES

Carew, Jean et al. Observing Intelligence in Young Children. Englewood Cliffs NJ: Prentice-Hall, 1976.

Clarke-Stewart, K. Alison. "Interactions between Mothers and their Young Children: Characteristics and consequences." Monographs of the Society of Research in Child Development 38, no. 6-7 (December 1973): 1-109.

_____. "The Father's Impact on Mother and Child." Paper presented at the Society for Research in Child Development meeting, March 1977.

Freedman, Daniel. Human Infancy, An Evolutionary Perspective. New York: Halsted Press, 1974.

_____. Paper presented at a conference on infant studies, Providence RI, 1978.

Goldberg, Susan and Lewis, Michael. "Play Behavior in the Year-Old Infant: Early Sex Differences." Child Development 40 (1969): 21-31.

Gordon, Ira J. The Florida Parent Education Early Intervention Projects: A Longitudinal Look. IREC Publication Office, January 1975.

Hess, R. D. and Shipman, V. C. "Early Experiences in the Socialization of Cognitive Modes in Children." Child Development 34 (1965): 869-86.

Koller, Terrence J. "The Relationship of Infant Temperament to Father-Infant and Mother-Infant Interaction." Ph.D. pilot study, Illinois Institute of Technology, 1979.

Lamb, Michael E. "The Father's Role in the Infant's Social World. In Mother/Child Father/Child Relationships. Edited by Joseph H. Stevens, Jr. and Marilyn Mathews. Washington DC: National Association for the Education of Young Children, 1978.

Lansky, L. M. "The Family Structure also Affects the Model: Sex-Role Attitudes in Parents of Preschool Children." Merrill-Palmer Quarterly 13 (1967): 139-40.

Lewis, Michael. "State as an Infant-Environment Interaction: An Analysis of Mother-Infant Interaction as a Function of Sex." Merrill-Palmer Quarterly 18, no. 2 (1972): 95-122.

Lynn, D. B. The Father: His Role in Child Development. Monterey CA: Brooks Cole, 1974.

Moss, Howard, A. "Sex, Age and State as Determinants of Mother-Infant Interaction" Merrill-Palmer Quarterly 13 (1967): 19-35.

Parke, R. C. and Sawin, D. W. "The Father's Role in Infancy: A Re-Evaluation." Family Coordinator 25 (1976): 365-77.

Rendina, Irma and Dickerscheid, Jean D. "Father Involvement with First-Born Infants." Family Coordinator (October 1976), pp. 373-78.

Slaughter, Helen. "Effect of Parent Involvement in an Early Intervention Program upon Environmental Process Variables Related to Achievement." Paper presented at the annual meeting of the American Educational Research Association, Washington DC, March 30-April 13, 1975. (ERIC Document Reproduction Service No. ED 107 373)

Sherrod, Kathryn, Vietze, Peter, and Friedman, Steven. Infancy. Monterey CA: Brooks and Cole Publishing Co., 1978.

Steward, Margaret and Steward, David. "The Observation of Anglo, Mexican and Chinese-American Mothers Teaching their Youngsters." Child Development 44 (1973): 329-37.

Weikart, David P. and Lambie, Delores A. "Early Enrichment in Infants." In Education of the Infant and Young Child. Edited by Victor Denenberg. New York: Academic Press, 1970.

Whimbey, Arthur and Whimbey, Linda Shaw. Intelligence Can Be Taught. New York: E. P. Dutton & Co., 1975.

Yogman, Michael W. "The Goals and Structures of Face-to-Face Interaction between Infants and Fathers." Paper presented at the biennial meeting of the Society for Research in Child Development, New Orleans, March 1972.